

REMARKS

Claims 10-16 are pending. By this Amendment, claim 16 is cancelled, claim 10 is amended, and no claims are added.

In view of the following comments, Applicants respectfully request favorable consideration and allowance of the claims.

Rejection Under 35 U.S.C. § 112, Second Paragraph

Claims 10-15 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Specifically, the Examiner rejected the "labyrinth-like" language in claim 10 as being indefinite. While Applicants do not acquiesce in the Examiner's assertions, claim 10 has been amended. Applicants respectfully request withdrawal of the 35 U.S.C. § 112, second paragraph rejection.

Rejection Under 35 U.S.C. § 103 Over Gardam, Horsthemke, Horsthemke II, and Wilmeth

Claims 10-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over "The Production of Machinable Cr Deposits" by Gardam ("Gardam") in combination with EP 1,205,582 and U.S. Patent No. 6,837,981 to Horsthemke (collectively "Horsthemke"), DE 44 32 512 to Horsthemke ("Horsthemke II"), and U.S. Patent No. 5,196,108 to Wilmeth et al. ("Wilmeth"). Applicants respectfully request reconsideration of the rejection based on the following comments. Applicants also incorporate by reference their comments from the Amendments of May 21, 2008, January 16, 2008, and April 2, 2007.

A *prima facie* case of obviousness of Applicants' claimed invention has not been established, as Gardam, Horsthemke, Horsthemke II, and Wilmeth, individually or in combination, do not disclose all of the features included in independent claim 10. Specifically,

the references do not teach or suggest a structured "hard chrome layer compris[ing] at least one of a cup-shaped structure, a labyrinth-like structure, or a column-shaped structure."

In the February 28, 2008 Office Action (page 4), in an attempt to meet her burden for presenting a *prima facie* case of obviousness, the Examiner cited Horsthemke's discussion of nodules that are accentuated for teaching a cup-shaped, labyrinth-like, or column-shaped structure. In response, Applicants noted that accentuated nodules represent a spherical structure, and not the claimed cup-shaped, labyrinth-like, or column-shaped structure (May 21, 2008 Amendment, page 6). The Examiner apparently now recognizes this difference, now asserting that "the prior art motivation or advantage may be different than that of Applicants while still supporting a conclusion of obviousness." July 30, 2008 Office Action. Applicants respectfully note that the Examiner's new assertion (different motivation or advantage) is related to the reasons for combination or modification of references, and does not relate to the Examiner's burden to present a reference or references teaching all elements of the claims. MPEP 2143.03 ("All words in a claim must be considered in judging the patentability of that claim against the prior art," citing *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)). Here, the Examiner has not yet presented a reference teaching a "hard chrome layer compris[ing] at least one of a cup-shaped structure, a labyrinth structure, or a column-shaped structure," as included in the claims. As such, a *prima facie* case of obviousness has not been met, as references teaching or suggesting such a feature have not been presented.

Further, the prior art has not suggested the combination of the above-noted references. As earlier noted, the Gardam reference is directed to forming *soft chromium layers* for cutting tools and the other cited references are directed to formation of *hard chromium layers* using

different electrolytes. The Examiner modified the electrolyte disclosed by Gardam with the missing electrolyte components using the Horsthemke I & II, and Wilmeth references. However, there is no motivation, suggestion or teaching to combine the cited references. The Examiner has shown no motivation to modify the Gardam reference as the Examiner has suggested. There is no rational, articulated reason provided to look at a reference directed to the formation of soft chromium layers when hard chromium layers are desired. ("[R]ejections on obviousness cannot be sustained with mere conclusory statements..." *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). Further, the Gardam reference is directed to the formation of soft chromium layers that can be machined by a cutting tool (page 69), *not* to hard chromium layers that must be *ground* to be shaped. The modification of Gardam proposed by the Examiner, and the result proposed by the Examiner, would render Gardam unsatisfactory for its intended purpose, which is to provide *soft chromium layers* that are *machinable* by a cutting tool. If a proposed modification would render the prior art invention being modified (Gardam) unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). MPEP §2143.01. Thus, there is no suggestion or motivation to add the missing electrolyte components to Gardam. The Examiner has not made out a *prima facie* case of obviousness.

Further, as recognized by the Examiner, Horsthemke teaches operation at "at a cathode efficiency of at least 15%." (Col. 5, lines 50-58). Likewise, as recognized by the Examiner, Wilmeth teaches away from its combination with Gardam. Wilmeth teaches a "cathode efficiency of the process is greater than about 18%." (Col. 6, lines 44-46). In addition, Gardam teaches away from the use of lower current efficiencies stating, "However the low cathode

current efficiency of 6% and consequent low plating rate of about 0.0006 cm/hr which are obtained with these conditions are impractical." Further, Gardam teaches the addition of trivalent metallic ions increases the cathodic current efficiency of chromium depositions at high temperatures, providing examples reaching cathodic current efficiencies of 10% and 12%. In each case, the references point to the desire to *increase* the cathodic current efficiency to greater percentages. (pages 71-73). However, none of the references teaches the desire for a cathodic current efficiency of 12% or less, and hence teach away from the instant application.

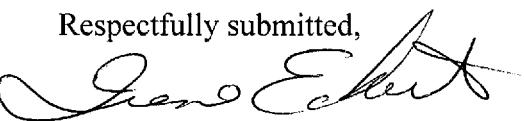
With respect to specific features of the claims depending from independent claim 10, these are not commented on further, as they are presently moot given the above analysis, although Applicants do not acquiesce in the Examiner's position. Applicants respectfully request withdrawal of the rejection.

Conclusion

In view of the foregoing, it is submitted that this application is in condition for allowance. Favorable consideration and prompt allowance of the application are respectfully requested.

The Examiner is invited to telephone the undersigned if the Examiner believes it would be useful to advance prosecution.

Respectfully submitted,



Irene Eckert
Registration No. 52,848

Customer No. 24113
Patterson, Thuente, Skaar & Christensen, P.A.
4800 IDS Center
80 South 8th Street
Minneapolis, Minnesota 55402-2100
Telephone: (612) 252-1541